

Causal Effect of Caffeine on Heart Rate

using latin square design

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Abstract

After drinking coffee, one's heartbeat raises. This kind of change in metabolism might be responsible for caffeine. To confirm this, we conduct an experiment. Blocked by coffe-to-water ratio and drinking speed, we build 4×4 latin square design with caffeine intensity factor. For each cell, we measure heart rate using ECG app installed in Apple Watch (it gives average BPM).

Contents

1	Introduction	2
2	Design of the Experiment	2
3	Data Analysis	2
4	Conclusion	2
	References	3
A	Appendix	4
A.1	Codes	4
A.2	ECG Results	4

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References

A Appendix

A.1 Codes

Package loading:

```
# tidyverse family-----  
library(tidyverse)  
# kable-----  
library(knitr)  
library(kableExtra)  
# set seed for report -----  
set.seed(1)
```

A.2 ECG Results



Figure 1: (1, 1), House blend (1)